

REMARKS/ARGUMENTS

These remarks are submitted in response to the Non-Final Office Action of February 22, 2006 (hereinafter Office Action). As this response is timely filed before the expiration of the 3-month shortened statutory period, no fee is believed due.

In the Office Action, Claims 1, 3, 5-6, 8-12, 14, 16-17, and 19-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,029,214 to Dorfman, *et al.* (hereinafter Dorfman) in view of U. S. Patent No. 6,411,283 to Murphy (hereinafter Murphy). Claims 4, 7, 15, and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dorfman in view of Murphy and further in view of U.S. Patent No. 5,677,710 to Thompson-Rohrlich (hereinafter Thompson-Rohrlich).

Applicants have amended independent Claims 1, 11, and 12 to emphasize certain aspects of the invention. Applicants also have amended dependent Claims 3, 4, 5, 10, 14, 15, and 21 to further emphasize certain aspects of the invention and to maintain consistency among each of the claims. The claim amendments are fully supported throughout the Specification. (See, e.g., Specification, p. 9, lines 11-14; p. 10, lines 1-20; p. 11, line 3 – p. 12, line 6; p. 15, lines 6- 10; p. 16, lines 15- 21; p. 18, lines 10-21; and p.21, lines 4-8.) No new matter is introduced by the claim amendments.

Applicants' Invention

It may be useful to reiterate certain aspects of Applicants' invention prior to addressing the cited references. One embodiment of the invention, typified by amended Claim 1, is a method for use in a computer-based system having a touch screen. The method can include detecting a contact made with the touchscreen and generating contact information specifying a size of the detected contact. The contact can be made, for example, by a user touching the screen with a stylus or with the user's finger, the size of the latter varying from one user to another.

The method can further include comparing the contact information corresponding to the detected contact with contact criteria and, based on the comparison offsetting an on-screen pointer a distance from the detected contact. The distance, more particularly, can be based upon the size of the detected contact. Accordingly, if the user touches the screen with his or her finger, the size of the user's finger and/or the pressure applied to the touch screen dictates the size of the contact and, therefore, also the distance that the on-screen pointer is offset from the detected contact.

The Claims Define Over The Prior Art

Dorfman is cited at page 3 of Office Action as disclosing a computer system and method that encompasses generating contact information in response to detected contact with a touchscreen, wherein the contact information specifies the size of the detected contact. Dorfman, however, does not generate contact information that specifies the size of the detected contact with the touchscreen, as recited in the claims.

In the specific portion of Dorfman cited in the Office Action as disclosing the generation of information specifying the size of the detected contact, there is no mention of contact size, neither its determination nor the generation of information specifying it. Indeed, as a close reading of the cited portion reveals, Dorfman describes not the generation or specification of a contact size, but rather the steps of dragging an element from a palette to a workspace using an input tablet configured in absolute-mode and relative-mode segments:

"In the present example, the input pointer is first contacted with the input tablet 18 in a segment 104 that is preferably in absolute-mode at a point labeled 'a.' This will position a pointer image at a point 106a. Next, the input pointer is engaged at a point b on the input tablet 18 within an

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absolute-mode segment 106. This selects a resistor icon, as illustrated, assuming the cursor is positioned on the screen at position 106b. Next, the input pointer is engaged with the input tablet 18 within a relative-mode 108 and moved as indicated by the arrow c. This causes a movement of the pointer as indicated at 106c. Next, the input pointer is lifted from the input tablet 18 and moved as indicated by arrow d on the input tablet 18, causing a corresponding relative-mode movement to put the pointer image at 106d. At this point, the button 20 can be pushed to drop the image of a resistor 110 in position on a schematic 112 within the window 104.

"Next, in the current example, a 'pen' tool is selected by engaging the input pointer with segment 114 of the input table 18. The segment 114 is in absolute-mode. Next, the input pointer is moved within relative-mode segment 108 as indicated by the arrow f to cause a corresponding movement of the pen tool 116 within the window 104 of the screen 26. Finally, the button 20 is pressed while simultaneously moving the input pointer within segment 108 as indicated by arrow g to cause a line 118 to be added to the schematic 112 as seen by the corresponding line g.

"FIG. 6d illustrates yet another segmentation technique for an input tablet 18 of the present invention. In this embodiment, the tablet 18 has been segmented with an absolute-mode segment 120, a relative-mode segment 122, an absolute-mode segment 124, and yet another absolute-mode or 'button' segment 126. This FIG. 6d also illustrates two types of input pointers, namely a stylus 130 and a finger tip 132.

"With continuing reference to FIG. 6d, when the finger tip, as illustrated at

132a, engages point a of the segment 120, a corresponding pointer image 134a selects the 'FILE' pull-down menu. The pull-down menu 136 is opened when another finger tip presses the button 20 as indicated at a' on FIG. 6d." (Col. 10, lines 24-63.)

Neither in the cited portion nor any other portion of the reference does Dorfman disclose either the determination or the generation of information specifying the size of contact with a touchscreen. Dorfman nowhere even alludes to the size of the contact with a touchscreen. Dorfman speaks only to the "scanning" of "conductive strips" using trackpad circuitry to determine movement and speed of movements along a touchscreen and to electrical field disruption to determine "the center of a disturbance" caused by contact with the touchscreen. (See, e.g., Col. 6, lines 14-39.) But Dorfman is entirely silent on determining the size of the "disturbance" – that is, the size of the contact – with the touchscreen. Neither the detection of movement along a touchscreen nor the detection of the center of contact with the touchscreen, however, provide a basis for specifying the size of the contact. Accordingly, Dorfman nowhere teaches or suggests generating information specifying a size of detected contact with a touchscreen, as explicitly recited in independent Claims 1, 11, and 12.

Even with respect to the determination of whether contact with the touchscreen is made by a stylus or a user's finger, Dorfman makes no mention of either determining the size of contact or distinguishing between a stylus and finger based on relative sizes. Dorfman merely states that the distinction can be based on "electronic profiles." (See Col. 13, lines 15-24.)

Murphy similarly fails to teach or suggest determining or generating information specifying the size of a contact with a touchscreen. Murphy, rather than determining the size of an area of contact, determines whether the area of contact is "within a predetermined distance of an edge of the touchscreen." (Col. 3, lines 5-10.) More

fundamentally, when Murphy speaks to "areas of contact," the areas of contact are independent of the size of contact made by a user's finger or other object. Instead, the areas of contact in Murphy are specifically designated areas on the touchscreen, exemplified by areas A_A-A_F in FIGS. 5A-5F, which determine the location of a hot spot depending on which of the areas a finger contacts the touchscreen. (See Col. 3, line 66 – Col. 4, line 37.)

Accordingly, these pre-designated areas of contact in Murphy are independent of the size of the finger contacting the touchscreen and thus provide no indication of the size of the contact with the touchscreen. (See FIGS. 5A-5F, where the illustrated finger of user is positioned differently relative to each of the designated areas of contact on the touchscreen.) This point is made explicit where Murphy describes that a user's finger contacts the screen "over" an area contact, but it does not determine the area of contact. (Col. 4, lines 3-4, "[a] finger F_A is in contact with the screen 50 over an area A_A."; see also Col. 6, line 27-29, "[a]s shown in FIG. 7, a finger F is placed on a touch screen 100 so that it contacts the screen 100 over an area A.") (Emphasis supplied.)

Moreover, Murphy nowhere teaches or suggests that the offset is based upon the size of the detected contact. Rather, Murphy calculates an offset based upon which of the respective areas a user's finger is over; that is, based on which designated area of the touchscreen the user touches. (See, e.g., Col. 4, lines 27-37; see also FIGS. 5A-5F.)

More fundamentally, Murphy's calculated offset is not influenced by, nor in any way dependent upon, the size of the detected contact since the offset is invariably measured from the center of the particular area in which the user's finger contacts the touchscreen. This is made explicit in the portion of Murphy cited at page 3 of the Office Action:

" As shown in FIG. 7, a finger F is placed on a touch screen 100 so that it contacts the screen 100 over an area A. In one embodiment a computer,

similar to the palmtop computer of FIG. 1, generates a cursor 102 directly above the area A at an offset distance R from its center C. The magnitude of the offset distance R is selected so that the cursor is positioned above the finger F and is thus visible to the user." (Col. 6, lines 27-36.) (Emphasis supplied.)

As the quoted portion describes, the offset calculated by Murphy is a fixed-value offset associated with a designated area of the touchscreen. Murphy's offset, accordingly, is not a function of the size of contact with the touch screen; that is, Murphy's offset does not depend on nor vary according to the size of contact. Therefore, Murphy further fails to teach or suggest offsetting an on-screen pointer a distance from detected contact with a touchscreen, the distance being based upon the size of the detected contact, as recited in each of amended independent Claims 1, 11, and 12.

It follows that neither Dorfman nor Murphy, either alone or in combination with one another, teaches or suggests each of the features recited in independent Claims 1, 11, and 12, as amended. Neither reference for example teaches or suggests generating contact information specifying the size of a contact with a touch screen, as recited in each of the amended independent claims. Accordingly, both of the references further fail to teach or suggest offsetting an on-screen pointer a distance determined on the basis of the detected contact based upon the size of said detected contact, as also recited in each of the amended independent claims.

Applicants respectfully submit, therefore, that independent Claims 1, 11, and 12, as amended, define over the prior art. Applicants further respectfully submit that, whereas the remaining claims each dependent from one of the amended independent claims while reciting additional features, the remaining claims likewise define over the prior art.

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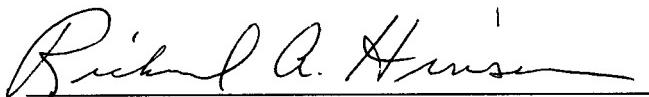
IBM Docket No. BOC9-1999-0084

CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. The Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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